AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1-66. (cancelled).

67. (new) A fluid mixing valve for servo control of fluid flows, comprising:

a valve body having at least two fluid inlet ports and at least one fluid outlet port;

a valve seat having a fixed valve seat contact surface adjacent a movable outlet valve member having an outlet member contact surface, the outlet valve member being rotatable about a first axis;

said valve seat having two adjacent inlet apertures there through separated by a dividing piece, and said valve seat having a closed area opposite the inlet apertures,

a first said inlet aperture communicating with a first of said two inlet ports, and a second said inlet aperture communicating with a second of said two inlet ports, a barrier on the inlet side of the valve seat separating the fluid flow from said at least two inlet ports so that the two supplies of fluids do not mix until after they have passed through the two inlet apertures in the valve seat;

said outlet valve member having an outlet aperture there through and a sealing area,

said outlet aperture communicating with said at least one outlet port,

the outlet valve member contact surface and the valve seat contact surface being arranged in substantially planar sealing contact with one another, the outlet valve member capable of rotation relative to the valve seat, wherein,

the outlet aperture of the outlet valve member is substantially sector shaped at the plane of the outlet member contact surface, with a sector apex at or close to the point of intersection of the first axis with the outlet valve member and with an arc at or close to the outside of the outlet valve member, and

the two adjacent inlet apertures of the valve seat are each substantially sector shaped at the plane of the valve seat contact surface with each having a sector apex close to the point of intersection of the first axis with the valve seat,

the sealing area of the valve member is greater than or equal to the combined area of the two adjacent inlet substantially sector shaped apertures so that the sealing area of the outlet valve member can cover and close the two adjacent inlet substantially sector shaped apertures, and

the outlet valve member can be rotated about the first axis between

a) a shut off position where both of the inlet apertures are closed by the outlet valve member,

b) a first inlet opened position where the first inlet aperture and the outlet aperture are aligned to allow fluid to flow from the first inlet port through the first inlet aperture via the outlet aperture to the outlet port, whilst at the same time the second inlet aperture is closed by the outlet valve member,

c) a second inlet opened position where the second inlet aperture and the outlet aperture are aligned to allow fluid to flow from the second inlet port through the second inlet aperture via the outlet aperture to the outlet port, whilst at the same time the first inlet aperture is closed by the outlet valve member, and

d) a mixing position wherein the outlet aperture overlaps with both of the inlet apertures to allow fluids to flow from said two inlet ports through the two inlet apertures and through the outlet aperture, and mix downstream of the outlet aperture so that the fluids can exit the outlet port.

68. (new) A fluid mixing valve as claimed in claim 67, wherein the outlet valve member is a first valve disk.

69. (new) A fluid mixing valve as claimed in claim 67, wherein the valve seat is a second valve disk and has an opposing surface on the other side of the disk from the contact surface.

70. (new) A fluid mixing valve as claimed in claim 69, wherein the two adjacent inlet apertures of the second valve disk have a greater area in the plane of the contact surface of the second valve disk than in the plane of the opposing surface of the second valve disc.

71. (new) A fluid mixing valve as claimed in claim 67, wherein the substantially sector shaped outlet aperture of the valve member at the plane of the outlet valve member contact surface has an angle of about 120 degrees at its apex.

72. (new) A fluid mixing valve as claimed in claim 67, wherein the two adjacent substantially sector shaped inlet apertures of the valve seat at the plane of the valve seat contact surface, each have an approximately 90 degree apex.

73. (new) A fluid mixing valve as claimed in claim 67, wherein the outlet aperture in the outlet valve member is in the shape of a removed sector.

74. (new) A fluid mixing valve as claimed in claim 67, wherein the valve seat contact surface has a recessed region.

75. (new) A servo actuated fluid mixing valve, comprising:

a valve body having at least two fluid inlet ports and at least one fluid outlet port;

a servo actuator attached to said valve,

a valve seat having a valve seat contact surface adjacent an outlet valve member having an outlet member contact surface, the valve member being capable of being rotated about a first axis by said servo actuator,

said valve seat having two adjacent inlet apertures there through separated by a dividing piece, and said valve seat having a closed area opposite the inlet apertures,

a first said inlet aperture communicating with a first of said two inlet ports, and a second said inlet aperture communicating with a second of said two inlet ports, a barrier on the inlet side of the valve seat separating the fluid flow from said at least two inlet ports so that the two supplies of fluids do not mix until after they have passed through the two inlet apertures in the valve seat;

said valve member having an outlet aperture there through and a sealing area,

said outlet aperture communicating with said at least one outlet port,

the valve member contact surface and the valve seat contact surface being arranged in substantially planar sealing contact with one another, and the valve member is capable of rotation relative to the valve seat, wherein,

the outlet aperture of the valve member is substantially sector shaped at the plane of the valve member contact surface, with its sector apex at or close to the point of intersection of the first axis with the valve member and with its arc at or close to the outside of the valve member,

the two adjacent inlet apertures of the valve seat are each substantially sector shaped at the plane of the valve seat contact surface with each having its sector apex close to the point of intersection of the first axis with the valve seat,

the sealing area of the valve member is greater than or equal to the combined area of the two adjacent inlet substantially sector shaped apertures so that the sealing area of the valve member can cover and close the two adjacent inlet substantially sector shaped apertures, and

the valve member can be rotated about the first axis between

a) a shut off position where both of the inlet apertures are closed by the valve member,

b) a first inlet opened position where the first inlet aperture and the outlet aperture are aligned to allow fluid to flow from the first inlet port through the first inlet aperture via the outlet aperture to the outlet port, whilst at the same time the second inlet aperture is closed by the valve member,

c) a second inlet opened position where the second inlet aperture and the outlet aperture are aligned to allow fluid to flow from the second inlet port through the second inlet aperture via the outlet aperture to the outlet port, whilst at the same time the first inlet aperture is closed by the valve member, and

d) a mixing position wherein the outlet aperture overlaps with both of the inlet apertures to allow fluids to flow from said two inlet ports through the two inlet apertures and through the outlet aperture, and mix downstream of the outlet aperture so that the fluids can exit the outlet port.

76. (new) A servo actuated fluid mixing valve as claimed in claim 75, wherein the servo actuator includes a stepping motor.

77. (new) A servo actuated fluid mixing valve as claimed in claim 75, further including a controller means.

78. (new) A servo actuated fluid mixing valve as claimed in claim 75, further including a sensing means which is positioned and adapted to sense at least one parameter relating to any fluid which passes through the at least one fluid outlet port, allowing feed-back control of the valve.

79. (new) A servo actuated fluid mixing valve as claimed in claim 78, further including a controller means.

80. (new) A servo actuated fluid mixing valve as claimed in claim 78, wherein the servo actuator includes a stepping motor.

81. (new) A servo actuated fluid mixing valve as claimed in claim 79, wherein the servo actuator includes a stepping motor.

82. (new) A servo actuated fluid mixing valve as claimed in claim 75, further including a user interface means.

83. (new) A servo actuated fluid mixing valve as claimed in claim 78, further including a user interface means.

84. (new) A servo actuated fluid mixing valve as claimed in claim 81, further including a user interface means.

85. (new) A servo actuated fluid mixing valve as claimed in claim 75, wherein the valve member is a first valve disk.

86. (new) A servo actuated fluid mixing valve as claimed in claim 75, wherein the valve seat is a second valve disk and has an opposing surface on the other side of the disk from the contact surface.

87. (new) A servo actuated fluid mixing valve as claimed in claim 86, wherein the two adjacent inlet apertures of the second valve disk have a greater area in the plane of the contact surface of the second valve disk than in the plane of the opposing surface of the second valve disc.

88. (new) A servo actuated fluid mixing valve as claimed in claim 75, wherein the substantially sector shaped outlet aperture of the valve member at the plane of the valve member contact surface has an angle of about 120 degrees at its apex.

89. (new) A servo actuated fluid mixing valve as claimed in claim 75, wherein the two adjacent substantially sector shaped inlet apertures of the valve seat at the plane of

the valve seat contact surface, each have an approximately 90 degree apex.

90. (new) A servo actuated fluid mixing valve as claimed in claim 75, wherein the outlet aperture in the valve member is in the shape of a removed sector.

91. (new) A servo actuated fluid mixing valve as claimed in claim 75, wherein the valve seat contact surface has a recessed region.

92. (new) A servo-controlled fluid mixing valve, comprising:

a valve body having at least two fluid inlet ports and at least one fluid outlet port;

a valve cavity housing a non-movable fixed inlet side valve disk adjacently contacting a single movable outlet side valve disk, the inlet side valve disk and the outlet side valve disk being arranged in substantially planar sealing contact with one another, the outlet side valve disk rotatable relative to the inlet side valve disk,

the movable valve disk being rotatable about a first axis of motion to provide fluid mixing control and flow on/off control of fluids, via flow through the movable disk from the inlet ports to the outlet port,

the movable outlet side valve disk being free of linear motion along the first axis;

a single stepper motor actuator operatively connected to the movable outlet side valve disk to rotate the movable outlet side valve disk about the first axis and provide the fluid mixing control and the flow on/off control through only rotatingly repositioning the movable outlet side valve disk by the stepper motor actuator;

said inlet side valve disk having two adjacent inlet apertures separated by a dividing piece, said inlet side valve disk being a closed area other than at the inlet apertures,

a first of said inlet apertures communicating with a first of said two inlet ports, and a second of said inlet apertures communicating with a second of said two inlet ports, a barrier on the inlet side of the valve seat separating the fluid flow from said at least two inlet ports so that the two supplies of fluids do not mix until after they have passed through the two inlet apertures;

said movable outlet side valve disk having an outlet aperture there through and a sealing area,

said outlet aperture communicating with said at least one outlet port, wherein,

the outlet aperture of the outlet side valve disk substantially sector shaped at the plane of the outlet side valve disk with a sector apex at or adjacent a point of intersection of

the first axis with the outlet side valve disk and with an arc at or adjacent an outside of the outlet side valve disk, and

the two adjacent inlet apertures of the inlet side valve disk are each substantially sector shaped at the plane of the inlet side valve disk with each aperture having a corresponding sector apex adjacent to the point of intersection of the first axis with the inlet side valve disk,

the sealing area of the outlet side valve disk is at least equal to a combined area of the two adjacent inlet substantially sector shaped apertures so that the sealing area of the outlet side valve disk can cover and close the two adjacent inlet substantially sector shaped apertures, and

the outlet side valve disk can be rotated by the actuator about the first axis between

a) a shut off position where both of the inlet apertures are closed by the outlet side valve disk,

b) a first inlet opened position where the first inlet aperture and the outlet aperture are aligned to allow fluid to flow from the first inlet port through the first inlet aperture via the outlet aperture to the outlet port, whilst at the same time the second inlet aperture is closed by the outlet side valve disk,

c) a second inlet opened position where the second inlet aperture and the outlet aperture are aligned to allow fluid to flow from the second inlet port through the second inlet

aperture via the outlet aperture to the outlet port, whilst at the same time the first inlet aperture is closed by the outlet side valve disk, and

d) a mixing position wherein the outlet aperture overlaps with both of the inlet apertures to allow fluids to flow from said two inlet ports through the two inlet apertures and through the outlet aperture, and mix downstream of the outlet aperture so that the fluids can exit the outlet port.